REMARKS

Reconsideration of the above referenced application in view of the following remarks is requested. Existing claims 1-29 remain in the application.

ARGUMENT

Claim Rejections – 35 USC § 102

Claims 1, 2, 4, 7-9, 11-14, 16-22, 24, 27, and 28 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,862,368 to deVries (hereinafter deVries).

Regarding independent claim 1, the Examiner asserted that Fig. 4, element 412 of deVries discloses the limitation of "estimating the noise power spectrum for each frame of an audio signal based on a plurality of signal power spectrum values computed from a corresponding plurality of adjacent frames," recited in claim 1. Applicants respectfully disagree. Fig. 4, element 412 of deVries provides, "Update estimated noise power spectrum." The corresponding description of element 412 in the specification of deVries provides,

> The next step [step 412] in the process is to update the estimated noise power spectrum. As described below, there are several techniques for accomplishing this task. One technique is to monitor each frame to determine the probability that the frame is a noise-only frame or a mixture of speech and noise. The noise-only frames are then processed to determine the noise spectrum. One feature of the subject invention is to use a leaky integrator with a time-varying forgetting factor to derive the noise power spectrum from the noise-only frames. This time-varying forgetting factor purges past noise frames after detecting and processing a rapid transition in noise power to allow the detector to quickly adapt to changing noise signals. Another type of noise detection method that may be used in step 412 is to simply monitor the power spectra of the frames for local minimum. One or more these local minima are then used as the noise spectrum.

See col. 4, line 55 through col. 5, line 4 of deVries. Clearly neither element 412 nor its detailed description discloses the limitation—estimating the noise power spectrum for each frame of an audio signal based on a plurality of signal power spectrum values computed from a corresponding plurality of adjacent frames. Nowhere does the cited portion or other portions of deVries disclose, explicitly or implicitly, that signal power spectrum values computed from its adjacent frames are used to compute the noise power spectrum for a frame.

Additionally, the Examiner asserted that Fig. 4, element 414 of deVries discloses the limitation of "computing dynamically an over-subtraction factor for each frame of the audio signal based on the estimated noise power spectrum of the frame," as recited in claim 1. Applicants respectfully disagree. Fig. 4, element 414 of deVries provides, "Calculate gain factors from estimated noise spectrum." The corresponding description of element 414 in deVries provides,

> After step 412, the next step, 414, calculates gain factors from the estimated noise spectrum. Several methods for calculating the gain factors are presented below. One method uses the concept of an audible masking threshold to attempt only to remove noise signals that are above the determined audible threshold. This method calculates a priori and a posteriori estimated signal to noise ration values based on the audible signal energy. These ratios are then used in a variety of gain calculation algorithms in place of the more conventional a priori and a posteriori estimated signal to noise ratio values.

See col. 5, lines 5-15 of deVries. The Examiner appears to allege that the gain factors disclosed in deVries are the same or equivalent to over-subtraction factor as used in claim 1. In fact they are not the same or equivalent to each other. The over-subtraction factor is described in the specification of the present application. The relevant example description provides, "In those methods, a constant over-subtraction factor is usually

adopted. For example, an over-subtraction factor of 3 may be used meaning that the spectrum subtracted from the signal spectrum is three times the estimated noise spectrum in each frequency." See page 3, the first paragraph above "Brief Description of the Drawings" in the specification of the present application. Clearly a gain factor and an over-subtraction factor are not the same or equivalent. Even if assuming that they are equivalent for the argument purpose, the cited portion or the entire deVries does not disclose this limitation at issue because nowhere does deVries disclose, explicitly or implicitly "computing dynamically an over-subtraction factor for each frame ...." The deVries reference does not disclose the dynamic nature of a gain factor. Thus, deVries does not disclose this limitation of claim 1.

Furthermore, the Examiner asserted that Fig. 4, element 416 of deVries discloses the limitation of "reducing the signal power spectrum of the audio signal at each frame in accordance with the over-subtraction factor computed for the frame," as recited in claim 1. Again Applicants respectfully disagree because the gain factors described in deVries are not the same or equivalent to over-subtraction factors.

For the forgoing reasons, deVries does not teach each and every element of claim 1. Thus, claim 1 is not anticipated by deVries. Accordingly, all of the claims that depend therefrom, particularly claims 2, 4, and 7, are not anticipated by deVries either.

Claims 8, 9, 11-14, 16-22, 24, 27, 28 are rejected for the same reasons set forth in the rejections of claims 1, 2, 4, and 7. For the same reasons presented above in traversing the rejections of claims 1, 2, 4, and 7, these claims are not anticipated by deVries. Therefore, Applicants respectfully request that the 35 U.S.C. § 102 rejections of claims 1, 2, 4, 7-9, 11-14, 16-22, 24, 27, and 28 based on deVries be withdrawn.

CONCLUSION

In view of the foregoing, it is believed that existing active claims in the present application are all in condition for allowance. If the Examiner has any questions, the Examiner is invited to contact the undersigned at (503) 264-1700. Early issuance of a Notice of Allowance is respectfully requested.

Respectfully submitted,

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